



# MAGAZINE

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FRONT COVER: *Sunset at Gairloch*, by W. Murray

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# JAPAN

## Some Reminiscences of a Recent Visit

By R. Oliver (Plastics Division)

Few businessmen take the long, expensive journey from England to Japan. And fewer still get off the beaten track of the westernised hotel to live among Japanese as one of themselves. Here is a fascinating account of the Japanese way of life, so different from our own.

IN the late spring of this year I had the rather unusual assignment of a short visit to Japan with no calls en route either way.

A glance at a map of the world soon showed that this would involve a lot of flying—the round trip by B.O.A.C. actually amounted to just over 20,000 miles in the air! I do not recommend this journey as a rest-cure unless a plane with sleepers is used, since nearly fifty hours each way must be spent in the same seat.

My arrival in Japan was no dull affair—but to begin at the beginning. We approached Tokyo Bay in the late afternoon with a fair amount of cloud about. No sign of Mount Fuji: I was to learn later that "his" appearances were infrequent, as a result either of cloud or heat haze. The greenness of the countryside after thousands of miles of yellow and the immense area of Tokyo (approximately the same size as London) were the two immediate impressions.

Haneda Airport is, incidentally, nearly as far from the centre of Tokyo as Heath Row from Piccadilly Circus. A pleasant surprise was the courteous efficiency of the Japanese officials, who appeared to view the formalities of arrival as something to be finished with as quickly as possible.

It was May Day and there were riots in progress. Except for one or two members of the Forces I was the only European in the plane, and B.O.A.C. provided a small station wagon (albeit with Japanese driver) specially for my benefit. We had a puncture en route to the hotel and spent nearly two hours driving up and down the back streets trying to avoid the mobs and waiting for the police to clear the streets in the centre of the city. And the driver had no English!

After a day in Tokyo it was decided that I should spend the first part of my Japanese sojourn in Kansai—the highly industrialised area around Osaka (the second city of Japan) and roughly equivalent to Lancashire. All the sleepers being booked for days ahead on the railway, I acquiesced ingenuously to making the journey by Japanese Air Lines. I then

learned they had had only four second-hand American planes and one of these had crashed into a 3000-foot mountain peak on a small island in Tokyo Bay two days previously, killing everybody on board.

Once again to Haneda Airport, and this time I was a solitary European in a plane full of Japanese. Half-way down the long airstrip we were airborne for a few feet when the port engine packed up. The plane bounced and waltzed to the very edge of the runway. There being no reserve plane, we waited three hours for repairs, which we were allowed to watch. The plugs having been changed, we were hustled on board (no time for any trial of the ailing engine) and the plane took off, albeit with curious noises, this time from the other engine. These persisted throughout the trip.

A Japanese interpreter met me at Kobe and I started a round of visits to works and offices in Kansai which lasted eleven days—I hardly spoke to a white man during this period. In fair measure I lived like a Japanese, sometimes staying at Japanese-style hotels, frequently eating at Japanese-style restaurants. I quote below a typical Japanese dinner, which would be accompanied by saki (rice wine) served quite hot.

*Hors d'œuvre.* Jellyfish pickled with rapeseed oil. Sliced raw squid garnished with sea-urchins. Soused broad beans.

*Soup.* Made from "Sakura" bean curd and containing zingibar mioga, nameka (a sort of mushroom), white gourd melon cut in round slices, and yuzu (something like lemon).

*Sliced Raw Fish.* Tunny. Thin cut of fresh sea bream. Red-coloured horseradish sauce.



*Side Dishes.* Pumpkin cooked with lemon. Vinegared sea-eel and rice (known as *sushi*).

*Seasoned Food.* Sweetfish, seasoned with salt, vinegar and ginger.

*Cooked Food.* Juicy egg-plant with bean paste and sesame sauce.

*Vinegared Food.* Rolled fresh sea bream.

*Juice.* Made from egg, bean curd and trefoil.

At the end of such a dinner, which is served in bowls with chopsticks as "cutlery" (and lasts for all of three hours), rice is always eaten; no more saki is then drunk. At this stage geishas may be hired to sing and dance and convert the evening into a party in situ—when whisky or Japanese beer is drunk. Alternatively, if in a city, the assembled company may repair to a night-club for the cabaret and Western-style dancing.

Once, after such an evening in Osaka, instead of taking a taxi back to the hotel I wandered downtown in the narrow streets to see what life was like behind the scenes. After a bottle of beer in a tiny café (the open entrance screened by the customary hanging "curtains"), I emerged to find nearly all the myriad neon signs, which even the smallest streets and shops boast, blacked out and the whole area largely shut up for the night. I was lost and Osaka is a big city (population over 4 million).





A JAPANESE DINNER PARTY at which I.C.I. are hosts. The party took place at an hotel in the hills behind Kobe. The four Europeans in the centre seated facing the camera are, from left to right: Mr. A. L. Hughes, Kobe Manager, I.C.I. (Japan) Ltd.; Mr. R. V. Taylor, Dyestuffs Division; Mr. P. R. Gaine, Sales Director, I.C.I. (Japan) Ltd.; and the author. The Japanese love a party, and one of the traditional customs in business circles is to arrange "get-together" parties from time to time. The general pattern of such an evening is similar to western ideas in that it involves reception and drinks, dinner, speeches and entertainment. Geishas are in attendance all the time and generally provide some of the entertainment in the form of singing and dancing.

Eventually a late-prowling taxi appeared, to my surprise and relief, but the driver knew no English and apparently had never heard of my hotel. Just then two policemen arrived on the scene, full of smiles and very amiable, but with no English and also no knowledge of my hotel. They helped me into the taxi, got in themselves, and away we went—to the local police sub-station! No English there either, but then I remembered I had my hotel key in my pocket. The police were at last convinced that I was not homeless in Osaka and (as events proved) did a smart piece of deduction from the monogram on the key tab. Even then the taxi-driver lost his way twice in driving me "home!" I suspect he was either new to the job or his normal trade did not take him uptown.

Japanese-style hotels and restaurants differ considerably in layout and customs from Western ideas; this is particularly marked in the case of hotels. These are mostly single-storey and frequently either consist of a number of "bungalows" interconnected or are constructed on a most intricate open pattern. They cover a considerable area of ground and are designed so that every room has its own private veranda looking out on to the very beautiful Japanese gardens.

Shoes are removed on entry, and it is customary after the day's work to take a bath. Clothes are taken off in one's room and a *yukata* provided by the hotel (a Japanese washable cotton dressing gown, also used as sleeping wear) is donned. The bathroom, normally a communal one and equipped with an anteroom, is spacious, tiled and drained; a three-quarters sunken cube-shaped bath is located in one corner. Small wooden stools and hand buckets are provided for washing, soaping, scrubbing and rinsing.

The bath is not entered until one is scrupulously clean. It is then a matter of endurance. The temperature of the water is never less than about 45° C. (113° F.), and one emerges after thirty seconds or so bright pink but wonderfully relaxed. The *yukata* is donned again and one remains clad thus for the rest of one's stay. (A heavier "overgown" is also provided for cold weather.)

Generally there are no public rooms in a Japanese-style hotel, except maybe a Western-style waiting room near the entrance. Dinner (and any entertainment that may be organised) is provided in one's private room. All the rooms are alike. They have floors of *tatami* (finely woven rush matting nearly two inches thick) laid in standard sections; and there is no furniture whatsoever, just one or two sets of built-in cupboards. Frequently there is more than one entrance—always by sliding panels of wood and paper. The opening to the veranda involves the whole "wall," this always being double-skinned—inner wood-and-paper panels, outer wooden shutters, both sliding into hidden recesses. This is really delightful in the spring and summer, since one can open up the whole "wall" in the morning and be practically in the garden.

A very low portable table is brought in for meals, and one sits (or squats) on a cushion on the floor. For sleeping, a mattress and bedding are brought in and placed on the floor; a minute hard sausage of a pillow is provided. However, I never experienced any difficulty in sleeping soundly. The absence of a bell-push, the similarity of all rooms when viewed from the passageways, the use of sliding panels (and of course no locks and keys), and the complete absence of any numbers on the rooms are features of life in a Japanese-style hotel which

can cause embarrassment—and amusement, for the Japanese have a keen sense of humour!

I visited a number of temples and shrines and was rather aghast at the apparent scant respect shown for these. I gained the impression that religious observance generally is no stronger than in many Western nations. The basic religion is Buddhism, and many images of Buddha can be seen; the two largest (at Nara and Kamakura) are some fifty feet high, but the precincts of both are highly commercialised. Complementary to Buddhism there exists the cult of ancestor-worship (Shintoism), and I suspect that, basically, this occupies more of the Japanese' thoughts than his religion.

Like the British Isles, Japan is an island adjacent to a large land mass. Climatic conditions are only a little warmer than here. Trees and vegetation, as well as fruit, vegetables and flowers are all very like our own, except that paddy-fields take the place of corn. In fact, at times I had a strong feeling that I was in the western half of Britain until some essentially man-made feature intruded and impressed its Japanese character on the scene.

The Japanese are fond of sport of all kinds and show a natural aptitude for ball games. American influence has ensured the general popularity of baseball as a summer game, while golf is attracting the wealthier Japanese. Of many interesting golf courses, one near Kobe is on top of a mountain 3000 feet up; despite its being a short course I found it very teasing owing to a continuous gusty wind. But even reasonably good greens are difficult to prepare, since turf as we know it does not grow well on the unfertile volcanic ash that constitutes Japan's subsoil.

Tennis is a very popular game, being played mostly on excellent clay, rubble or asphalt courts. The enthusiasm with which the younger generation are using any piece of wall as a knock-up with racket and ball suggests that it will not be long before Japan produces another Shimizu. In the winter much football (soccer) is played, although rugby is becoming increasingly popular. Swimming and judo are traditional pastimes, and the Japanese are pre-eminent at these. The national hobby (apart from working!) is photography, and many excellent inexpensive cameras are available at a fraction of the cost in England.

Before ending my stray thoughts on Japan I must put in a good word for the Japanese. In the first place, the immediate atmosphere of Japan, after the 2000-mile hop across the sea from Hong Kong, is quite different from that of the East. From Suez to Rangoon is a different world from western Europe; from Bangkok to Hong Kong there is a change, but one is still "east of Suez." Arriving in Japan one senses civilisation again in the widest sense; this is probably all the more marked as a result of seven years of American occupation. The Americans, although their efforts in some directions may not be altogether appropriate, have undoubtedly introduced many Western touches in an island community well able to see the advantages to be gained. One small example of this impressed me enormously: I was able to drink water from a tap without any qualms.

The average Japanese is a friendly, humorous and industrious fellow, setting great store on good manners and the petty courtesies of life. He is honest, clean in his habits and home, and generous in thought and deed; moreover he is fond of his children and kind to animals. He is imbued with a kind of oriental fatalism, the main tenet of which is to accept the present cheerfully, whatever it may bring, and not to show annoyance or displeasure. So much on the credit side.

He has, however, two racial weaknesses which can for a moment or for a period outweigh all his good features. He is incapable of either feeling pity or showing original thought. An instruction from above is carried out without question; if it is a distasteful order, he cannot pity even himself.

To conclude in lighter vein, mention must be made of the female half of the population. The combination of Buddhism and Shintoism in Japan has led probably to the strongest patriarchy in the world, certainly among civilised peoples. The status of womankind can be summarised as existing to serve man's any and every wish—preferably to anticipate it. This is done with the lightest of touches, with much grace, and in a cheerful manner. It is difficult to describe my reactions, as a male visitor, to such an environment. I imagine it is unique in the world, bearing in mind the cultural level of the Japanese and the general atmosphere of civilisation. One feels, perhaps, that one has drifted into another world. Certainly my visit to Japan was an interesting and intriguing interlude and one that few Englishmen are lucky enough to experience.



## The Chargehand BRINEFIELDS BORER

If you leave the Alkali Division's Winnington works by the road that leads past Marbury Hall you can drive through nearly five miles of country lanes—seeing very little evidence of industrial activity—until you come without warning on a sight that must be unique in the English countryside.

The country is the same—English fields divided by English hedgerows; an oak tree here and a farmhouse there—but to the north and west, as far as you can see, stretch row upon row of neatly spaced black quadrangular derricks. If it were not for the hedges and farmhouses you might feel you had been miraculously transported to an oilfield in Texas, but the reason for the derricks is not oil, but salt.

Under every derrick is a very deep borehole, and under the hole is a spacious domed circular cavern, often as big as St. Paul's Cathedral, filled with brine and surrounded by solid salt. Nearly a thousand feet below the fields and farms of Holford—for that is where we are—is a city of such silent, brine-filled caves. Once there was a continuous bed of solid rock salt, but the caves were formed as water pumped down the holes dissolved the salt away and carried it in a gushing torrent of brine to the four Cheshire ammonia-soda works of the Alkali Division, to the Salt Division Works at Weston Point and to the General Chemicals Division Works at Northwich, Runcorn and Widnes.

Every year several caves reach their full 300 ft. span and development is stopped, and every year a number of new borings are completed so that new caves can be sluiced out of the solid salt to maintain the flow of brine. As each new boring is started, a new derrick joins the army that is marching slowly across the fields of Holford.

The oldest and most experienced of the small team of highly skilled men who drill the new holes is Samuel Dickens. For twenty-seven years Sam has been drilling holes down to the Holford salt deposits, keeping up an average of four holes a year.

Drilling a truly vertical hole 1000 or so feet deep is not as simple as it sounds. The length of the hole is nearly one thousand times its diameter, and this means that, scaled down, the job is rather like drilling an inch hole down the middle of a telegraph pole.

Once, in Sam's younger days, a hole began to go off centre, and he was lowered ninety-six feet down a two-foot shaft to chip away the bottom of the hole to get the drill centred. When he looked up and saw the tiny hole above him he wondered,

he says, whether he would ever get out. "I'm afraid they couldn't get me into a two-foot hole today," he adds; "I weigh fourteen stone now!" Sam, indeed, is as well set up at 65 as many a man of 40. He bicycles six miles to work every morning and six miles back to his house at Antrobus every night—except when it snows, and then he walks.

The first operation in drilling a borehole is to set up the percussion rig, by means of which a heavy, spade-like bit is bounced down deeper and deeper, a pause being made at intervals to remove the clay sludge so formed. The drilling action of a percussion bit is similar to that of a pneumatic drill, and by this method the first hundred feet or so of the borehole—the clay layer—is drilled to some 15 in. diameter.

Then this part of the hole is "cased" or lined with concrete and Sam changes over to "rotary shot" drilling for the marl layer. For this a hollow rotary bit is used in conjunction with small hard cast-iron pebbles or "shot." The shot acts like very coarse abrasive powder, giving the bit much greater cutting power. As it bites stage by stage into the marl a hard core rises up the centre of the bit, and this is removed each time the bit is raised to add another length to the drill. The sections of core are laid out alongside the drilling rig so that the progress of the hole can be followed and Sam will know exactly when he reaches the salt deposit.

When the correct depth has been reached Sam draws up his drilling string, packs up the rig and hands his borehole over to the brinefields engineers. They will connect up the water inflow and brine return pipes and supervise raising the brine until an underground cavity of the correct size and shape has been formed.

In Sam's young days, of course, they pumped only brine formed by natural seepage, and they went on pumping, more or less, until a field began to settle down or someone else complained that his borehole had dried up. For the last fifteen years, however, all brine for the Alkali Division has been produced by controlled methods as outlined here. Techniques have been developed for controlling with remarkable accuracy the size and form of the underground cavities, so that enough salt is left behind to give firm support to the land on top.

Surveys are made regularly, using the most delicate equipment obtainable, and over the twenty years no trace of subsidence has been detected, although since 1934 thousands of tons of rock salt have been dissolved every day. F.M.S.H.B.



Samuel Dickens (Brinefields Borer)



# Information Notes

## 'TERYLENE' GOES AHEAD

By Dr. E. D. Kamm ('Terylene' Council)

*It will be another two years before the £10m. 'Terylene' plant now going up at Wilton comes into full production. Meanwhile the output from the pilot plant at Hillhouse Factory has enabled the textile industry to familiarise itself with the new fibre which is indeed the answer to the housewife's prayer.*

IN November 1950 the Board of I.C.I. announced its decision to build at Wilton a first full-scale commercial plant for the production of 'Terylene' to cost something well in excess of £10 million, and readers may wonder how this great venture is proceeding and when they may expect to see and be able to buy in the shops the remarkable garments of which they have heard. This Information Note is written to give a very brief progress report.

With present shortages of building labour and materials it takes about four years to build a factory of the size of the Wilton 'Terylene' project, and therefore it is not expected that supplies of yarn and fibre can become available for sale from Wilton until the end of 1954. Meanwhile, however, a pilot plant has been brought into production at Plastics Division's Hillhouse factory in Lancashire. The Hillhouse plant is a pilot plant in the sense that it is only intended to provide processing information to I.C.I. and quantities of product to be sold to the textile industries to enable them in turn to find out and overcome any difficulties in processing and finishing—inevitable with any completely new fibre.

To do this, however, we have had to work on a scale which would be considered commercially large for many I.C.I. products. The annual turnover is already approaching a rate of £500,000 per year and may be doubled before Wilton starts producing.

Within the next few weeks lucky shoppers with keen eyes may be able to buy—in the best class of shops—men's shirts which really need no ironing, and men's socks which have all the comfort of the traditional woollen article but which will wear many times longer without needing to be darned. A large consignment of ladies' underwear has already been shown at Harrods and at Marshall & Snelgrove in London, and at one or two provincial stores—shown, only to be sold out within a very few days.

Some curtain net made from 'Terylene' is also on sale in

limited supplies. This has the double advantage of almost indefinitely resisting rotting by exposure to light and air while at the same time being easily washed without any risk of shrinking, easily dried just by hanging up for an hour or two, and requiring no ironing. Lucky indeed will be the housewives who can track down and purchase any of this extraordinary new material.

But the advantages of 'Terylene' are not confined to the fields of apparel and household goods. There are most important industrial uses as well. I.C.I. itself is already saving large sums of money by the substitution of acid- and heat-resisting 'Terylene' filter cloths for those of wool or cotton previously used: savings not only of actual cloth but of machinery working hours, for the new cloths may have to be changed less than a fifth as often as were the old ones.

'Terylene' ropes used experimentally as whaling "foregoers" in last season's fishing in the Antarctic met with such success that a number of the whaling companies have placed orders for next season for many more ropes than can be made from the yarn available. Trawl nets have been made giving upwards of twenty times the life of those normally used, and experiments are proceeding in a whole host of other industrial uses.

The development of such a large project, differing in many ways from that of most of I.C.I.'s new products, has called for flexibility of outlook and organisation which has been readily provided. Nearly 400 members of the staff, about equally divided between Dyestuffs and Plastics Divisions, are at the moment specifically working on 'Terylene'—in addition to a team in Billingham Division concerned with the production of *p*-xylene (one of the basic raw materials). The direction and co-ordination of all this effort has been placed in the hands of the 'Terylene' Council, a new body of Divisional board status consisting of eight full-time members together with visiting members from the boards of Nobel, Plastics and Dyestuffs Divisions.



*Architect's Drawing for the Wilton 'Terylene' Plant*

## FIVE CLASSES OF SYNTHETIC FIBRE

By Dr. Rowland Hill ('Terylene' Council)

*The future of synthetic fibres was the subject of Dr. Rowland Hill's address to the British Association at Belfast in September. Here is a shortened version of what he said.*

THE future of synthetic fibres hinges upon this simple fact: success will come to those fibres which show the greatest measure of useful distinctiveness at an economic level. It will depend, too, upon the skill and ingenuity of textile manufacturers in designing and processing finished goods which best utilise their unique qualities. This may require the development of new machines for spinning, weaving, dyeing and finishing to produce the best possible results.

The present annual world production of all textile fibres is about 20,000 million pounds, increasing at the rate of 3% per annum. Of this total the rayons contribute 14%, and the synthetic fibres—mainly nylon at the moment—about 1%.

The combined efforts of very many scientists spread across the past twenty-five years have led to five classes of fibres, these being respectively polyamides (nylon, perlon), polyesters ('Terylene'), polyacrylonitrile (orlon, acrilan), polyvinyl chloride and polyvinylidene chloride. Minor modifications to these structures for specific purposes may be expected, but the birth of a structurally new fibre of merit and distinction is rare and is becoming increasingly less likely. The relationship between polymer structure and primary properties such as melting point, crystallinity and orientation is now well

founded, but it is not yet possible to forecast, in useful detail, fibre properties from structure.

Discovery may result from the inspired work of several individuals, but development and commercialisation demand large sums of money and a great many different kinds of technical skill. There have been two broad types of discovery and development in synthetic fibres. Firstly the utilisation of polymer intermediates developed for non-fibre uses (i.e. vinyl and vinylidene chlorides originally produced for plastics, and acrylonitrile for synthetic rubber), and secondly the production of rare chemical intermediates because they provide fibres of desirable properties (e.g. adipic acid, terephthalic acid and caprolactam).

As a class, synthetic fibres are characterised by high strength, low moisture absorption and chemical inertness. The strong point of nylon lies in its outstandingly good abrasion resistance; orlon is distinguished by superlative light and weather resistance, and 'Terylene' polyester fibre by certain desirable wool-like characteristics in appropriate constructions.

Many unsuccessful attempts have been made to simulate wool-like elasticity in synthetic fibres by attempts to build up structures suggested by that of wool itself. The answer seems to be emerging from an entirely unsuspected direction, since the chemical structures of wool and 'Terylene' are so dissimilar.



## HEALTH SERVICE AT THE ZOO

By D. D. Ogilvie (Pharmaceuticals Division)

*Animals no less than human beings benefit from the new drugs which science has produced, and not least the animals at the zoo. Here is the story of just how these drugs have helped the zoos, and of the difficulties attending their practical application.*

NEW drugs and chemicals have done much to improve the health and condition of wild animals in captivity, and many I.C.I. products are today extensively used in zoos. Penicillin, 'Sulphamezathine,' 'Phenothiazine' and 'Gammexane' have proved particularly valuable and are in regular demand at Whipsnade and Regents Park.

I.C.I. salt licks, too, are popular with zoo keepers, particularly in hot countries; and in the Khartoum zoo one is placed in every cage and enclosure. But even so innocuous a medication as a salt lick can cause trouble in a zoo. In a South American zoo a large anaconda once tried to swallow his 4½ lb. salt lick whole. As its normal diet in the wild state might be anything from a large-size goat to a snake only slightly smaller than itself, depending upon supplies, swallowing the salt lick would have presented little difficulty, but its keepers thought ill effects might follow the consumption of so much salt in one go and the anaconda was made to regurgitate.

Medicines are usually given to the larger zoo animals in either their food or drinking water. Fortunately most animals swallow their food quickly without undue examination of it, and it is not difficult to bait fish or meat with tablets or capsules. Some animals, however, remain highly suspicious even in captivity, and keepers have to keep a close watch to see that they do not abstract and reject their medicines. Medication of drinking water is generally the most satisfactory method of giving drugs to such animals.

Zoo keepers have their own ways of dealing with animals—even the large and intractable ones—when they are sick or hurt. Those needing special treatment are usually run into narrow cages where they have no room to manoeuvre. Even a lion's sore paw can then be drawn through the bars and treated. If the operation is to be a very painful one, his tail is seized and an intravenous anaesthetic injected.

Sometimes most difficulty is encountered with the less savage but more excitable animals, which if incorrectly handled quickly become unmanageable. The larger birds are notorious for this. Cassowaries, for instance, the most powerful of the ostrich tribe, kick out in all directions if frightened or excited, and they are so strong that they can do much damage. Even the apparently placid zebra can be extremely dangerous if not handled with care.



*Penguins fall ready victims*



*Monkeys succumb in great numbers*

Unfortunately, despite the advances which have been made, a number of serious disease problems remain in zoos, and attention continues to be directed to these. Two species of animals greatly beloved by the zoo-going public are specially prone to disease. These are the monkeys and the penguins.

Monkeys succumb in great numbers to tuberculosis, which is usually of human origin and presumably contracted from their admirers who crowd round the enclosures. In their natural state monkeys so rarely encounter tuberculosis that when they do meet it they have no resistance, and they quickly die of it in captivity.

Penguins, too, are most difficult to maintain under zoo conditions. Their sedate and dignified manner and their general air of opulence and well-being would lead one to think that they are among the most completely adapted of all zoo animals. Unfortunately they fall ready victims to a disease known as aspergillosis, which is a lung infection with a mould and which so far has not responded even to the latest methods of treatment.

But zoos on the whole are places happy with children's laughter. That is how they should be. Most of the animals are happy too. They have either been born in the zoo, arrived there so young that they have forgotten their life in wild state, or are so well fed and cared for that they have little desire to leave their cages.

The best and easiest way to maintain zoo stocks is by breeding, but some animals will not breed in captivity and others will not rear their offspring once they have produced them. Some zoos are more successful at breeding than others. Dublin Zoo, for example, has a great reputation for breeding lions and usually has surplus lions which it supplies to other zoos in Europe.

Most larger zoos have teams of experts continually in the field collecting animals and sending them back. Transportation by land and sea of large wild animals or oddly shaped ones, like giraffes, often presents more problems than capturing them. Increased world prices and higher costs of transportation have sent prices of zoo animals soaring. Many of those imported now cost £1000 or more before they reach their zoo cages. Hence closer attention than ever is paid today to the health of zoo animals.

## MORE JOBS FOR NYLON

By Alex Janusitis (Canadian Industries Ltd.)

*In America, where nylon polymer is becoming increasingly plentiful, the use of nylon for other than textile purposes is being more and more developed. This article is reprinted from a recent issue of Oval, the bi-monthly journal of C.I.L.*

WHEN you open the door of one of the new refrigerators on display, you may not know it, but you are setting in motion nylon rollers which contribute to its smooth operation. Many domestic refrigerators today feature nylon bolt rollers in their doorlocks.

Conventional metal doorlock rollers in the past had to be lubricated, and the resultant film of lubricant on the exposed areas of the mechanism presented a soilage hazard to the user. Nylon rollers were given rigorous tests, and after they proved conclusively that they could take it, and without any lubrication, manufacturers swung over to nylon.

This is but one of the many new jobs for nylon. On the farm, in the home and in the factories nylon gears and bearings in a wide variety of shapes and sizes are establishing records in durability, efficiency and cost-reduction. Industrial engineers are moulding and machining nylon—versatile plastic, that it is—into many other forms to serve your needs and solve your problems.

The importance of nylon as an engineering material stems from its ability to meet design requirements not fulfilled entirely either by other plastics or metals. Nylon has many unique physical properties. It has a high resistance to heat, chemicals and abrasion and may be easily lubricated if necessary. It is also noted for its high tensile, shear and flexural strength. It will accept severe strains, and when subjected to a sharp impact will distribute the stress by slight deformation and then recover.

Nylon parts are already being used in farm equipment, automobiles, electric razors, textile machines, floor polishers, lawn sprinklers and cameras. Nylon gears are also ideal for food mixers, since they are not affected by salad oils and the various materials with which they come into contact. They operate efficiently and without lubrication of any kind. The field will be extended soon when manufacturers enter into full-scale production of other moulded nylon parts such as valves, washers, rivets, gaskets and gramophone parts.

Bushings made from nylon are being tested in seeders, pony tractors and ploughs, and nylon bearings for giant combine harvesters are being designed to replace the wooden gears used for the straw-walker crankshafts.

Another interesting application of nylon is in coil-forms.



*Subject to sharp impact*

The toughness of nylon allows it to be used in thin sections, using less material and leaving more space for additional wire. Moreover, its heat resistance enables it to withstand the baking cycles commonly used, and its toughness prevents breaking of flanges during winding operations.

An example of the application of nylon in relatively high-speed operations is in the spin-block flyer, a textile-machine part used in the twisting of yarn during spinning. In this application 100,000 nylon pieces have been in service for three years. The nylon flyer requires no lubrication, while the material which was used previously required frequent lubrication. The nylon is easily cleaned, does not bind on the spindle, and does not swell through absorption of moisture. Also, nylon has the important advantage of eliminating contamination of the yarn by lubricating oil.

A technique for the installation of nylon bushings in diecast metal parts has been developed which opens a broad field for nylon bearings in radios and automatic gramophones, toy trains and other mechanical toys, clock mechanisms and similar applications. In the past, assembly cost for such items has precluded the use of durable bearings because of the hand labour involved in their installation.

Another quality of nylon—its quietness in operation—is leading to the use of nylon gears in light machines for household use and in motion-picture and sound-recording equipment. The ability of nylon to damp mechanical vibrations, it has been found, will frequently prevent annoying noise in gear trains and tends to reduce vibration.

By replacing a laminated speedometer take-off drive gear with one of nylon an 80% reduction in production cost was achieved by one automobile manufacturer, and at the same

time the nylon part was superior in performance to the one replaced. Tests conducted with nylon gears in a well-known electrical floor polisher indicated that a normal life of 2500 operating hours could be expected as against 800 hours for the phosphor-bronze gear currently being used.

Nylon parts are produced from moulding powder by injection moulding, which rapidly produces intricate shapes to close dimensions and is inexpensive if the quantity of pieces is sufficient to warrant making the die cast. Where the quantity of pieces required is small, machining techniques similar to those employed for metals can be used.



*Produces intricate shapes*



## ON LISTENING TO ORCHESTRAL MUSIC

By W. F. Algie (Nobel Division)

*Some of us—of whom the Editor is one—may have felt that orchestral music is too difficult for the man with no musical background to understand. But appreciation of good music is largely a question of intelligent listening, and this article tells you how to learn to listen.*

"LISTEN to it but I don't understand, I only wish I could." How often have not these words been said! But you do not have to be very old or even very wise in the ways of the musical world to appreciate good music. The works of Beethoven, Brahms or Bach can be readily understood, given only a little time and patience in learning how to listen.

For listening is not simply a question of switching on the wireless full blast and then picking up a book or starting a conversation. It requires a little more effort than that.

To listen to a symphony is not a hard task, but a full appreciation can only be obtained if the listening is intelligent. You must use your brain as well as your ears. Hearing and listening are not the same. If someone rings your front-door bell you hear the sound instinctively without having to listen for it. The action is purely automatic. But should somebody speak to you, you must listen if you want to know what they are saying. This action is not automatic. It calls for a certain amount of concentration, and thus your brain is used as well as your ears.

So too with a musical composition. It must be listened to if it is going to make any impression on you. And by listening is clearly implied a concentration on the music to the complete negation of all that is going on around.

Nowadays the music lover is lucky. He has three mediums by which the music can be conveyed—the wireless, the gramophone, and finally the concert hall. The most reliable method is to go to the concert hall and have the music first hand.

If you listen intelligently you will soon discern that the orchestra is made up of four distinct families or sections, and you should try to hear each as a separate entity. This is not so difficult as it may appear. Try looking at a particular section to the exclusion of the rest—the result will surprise you. The section appears to be playing right at you.

A symphony requires more than one hearing before it can be assimilated. It is here that the radio or gramophone helps. Play over the work once or twice, and gradually little melodies will be recognisable: you will start to whistle them because they please you.

Note how the composer has repeated them but always with a slight difference. No monotony in this. He throws your little melodies from one instrument to another, like footballers passing a ball. You hear it again, but this time it sounds fresher—it is in a different key. All this is what a musician



Three mediums



"Straight" music

means when he talks about the development. By doing those things intelligent listening soon becomes a habit.

The greater the familiarity with a piece of music, the more time is available during its performance for the finer points. To be able to bask in the atmosphere of superb string playing or a particularly pure clarinet tone is well worth the small amount of necessary spadework. These finer points are not beyond the average listener, and any good orchestra has a wealth of them to be enjoyed by anyone who cares to listen.

There is a very good recording available which tells the story of a fairy tale by using the various instruments of the orchestra to depict the principal characters. It is called "Peter and the Wolf." A string quartet (two violins, viola and cello) represent Peter. The wolf is played by the tympani drums, and the bassoon plays the part of the old grandfather. In addition to this there is a commentator who proves of great value in explaining the action throughout the performance. After listening to this record few could help becoming interested in this so-called "straight" music.

As with every large and complex body, there must be someone in complete control or the general result would be chaotic. This applies both to the orchestra as a whole and also to the individual instrumentalists who comprise it. The conductor has sole charge. For him the orchestra is an instrument on which he plays. The individual musicians produce the sound, but the conductor interprets the music.

Who then is the more important, the conductor or the players? A good conductor can produce a high standard of musicianship from mediocre material, but the reverse does not hold good. His baton might be termed the autocrat of the orchestra. It commands obedience, and through it a

wealth of expression can be conveyed.

Sir Henry Wood used to say to his orchestra when things were not going too well at rehearsals, "Watch my stick, gentlemen, it is quite clear. I practise for half an hour every morning before a mirror." These few words contain the secret of the orchestra's greatest power of expression.

Admiring friends had to turn the deaf Beethoven round to see the applause given to the first performance of his Choral Symphony; yet, despite the affliction, the composer could inwardly hear every note. His life training had put him beyond the necessity of hearing in order to enjoy. We need to listen in order to enjoy, but first we must know how to listen.



Winnington Works from across the river Weaver

## SODA ASH

Here is the story of the largest plant in Europe devoted to making a single chemical, illustrated by the water colour impressions of a distinguished artist, Arthur Horowicz

THE Wallerscote Works of Alkali Division in Cheshire is the largest plant in Europe devoted to the manufacture of a single chemical. It is capable of producing sodium carbonate—known to the trade as soda ash—at the rate of nearly two thousand tons a day. This is a fantastic figure.

Moreover, for every ton of soda ash made altogether some ten tons of limestone, brine, coal and coke are handled. The flow of materials through Wallerscote Works alone is therefore around twenty thousand tons a day.

An ammonia-soda plant must be near its raw materials if it is to operate profitably. Wallerscote is ideal in this respect.

In fact within the limits of the present knowledge of mineral deposits the Winnington-Wallerscote area is probably about the best site in the world for making soda ash.

The key raw material is salt. In Cheshire there are almost limitless salt deposits many hundreds of feet underground. The salt is brought to the surface in solution—in other words, as brine—by means of boreholes where water is forced down one pipe under pressure and returns up another as brine. The brine is piped to the Wallerscote Works from boreholes only five miles away.

Of the other raw materials limestone comes in 40-ton wagons



from the Tunstead quarry of Lime Division near Buxton in Derbyshire, 40 miles away; cooling water comes from the river Weaver beside which the works is sited; finally, coal and coke come by rail from the Midlands. The finished soda ash can be distributed by road, rail or water—for the home trade by road and rail, in respect of which Cheshire holds a commanding central position; and for the export trade by water in Alkali Division craft, which travel down the Weaver to Liverpool or Birkenhead and there off-load on to ocean-going vessels.

Just how these huge quantities of soda ash are utilised by industry is beyond the scope of this article to explain. The soap, glass, rayon, chemical, paper and textile manufacturers are the principal consumers, roughly in that order of importance; but there are also another 400 industrial processes which would cease to operate if they did not obtain their supplies of this vital chemical.

Soda ash is made—to put it very simply—by combining the sodium in sodium chloride (which is salt) with the carbonate in calcium carbonate (which is limestone). Unfortunately no amount of thermal or catalytic coaxing will persuade this straightforward reaction to take place. The two chemicals are as uncooperative as two men who will not speak to each other except through a solicitor. In this case the solicitor, so to speak, is ammonia, a gasworks and coke-ovens by-product. Ammonia is very readily dissolved by the salt brine, and when the carbonate is added in the form of carbon dioxide, obtained by burning the limestone, then sodium bicarbonate (easily converted into sodium carbonate) is precipitated.

The 150 ft. high kiln building is the first feature of the works to catch the eye of the visitor. Inside one can climb stage after stage of metal steps and gaze at vistas of conveyor bands carrying coke and limestone into the dwindling distance. As in most chemical plants, the sections that provide mechanical feasts for the eye are the simplest. All that is happening here is that limestone and coke are being lifted to hoppers, blended

in the ratio of 10 : 1, and the mixture carried by conveyor to the kilns.

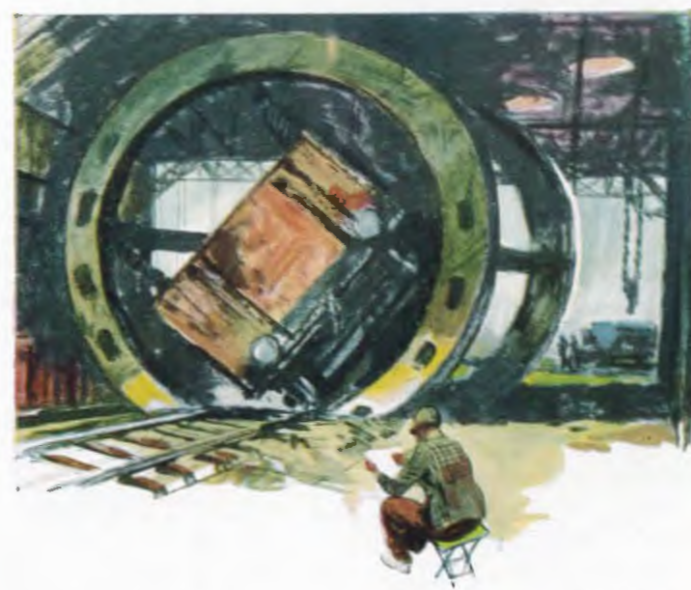
The conveyors run to a bank of limekilns, each some 20 ft. in diameter and 80 ft. high. The mixture of limestone and coke is fed in continuously at the top, the air supply is regulated to keep the coke burning in the middle of the kiln, and the burnt limestone, or quicklime, is continuously withdrawn at the base. The quicklime is slaked with water to form milk of lime, and then pumped over to the process building where it is used at a later stage to recover the ammonia after this has done its job.

In an ordinary limekiln the waste gases escape to the atmosphere, but in the ammonia-soda process the object of burning the limestone is not only to produce quicklime but also to obtain good strong carbon dioxide. Accordingly the kiln gas is drawn off and purified, or "scrubbed."

The heart of the process lies inside the enormous process building, a huge structure with a 15-storey lift at one end. This building is in two parts. The first part contains the ammonia absorption towers and recovery plant, and the second contains the carbonating towers.

The ammonia absorption towers are over 100 ft. high, rising majestically into the distant darkness of the process building. Into the base of each absorber is blown ammonia. Into the top comes purified brine. The brine cascading down the inside of the tower over a series of "bubble caps" absorbs the ammonia bubbling up, and a solution of ammonia in brine is drawn off from the base. This is then cooled and pumped to the carbonating towers in the other part of the building.

From the outside, the carbonating or Solvay towers (so called after the Belgian who first designed the apparatus) look very like the absorption towers—lofty, silent cast iron pillars that give no hint of the complicated chemical activity going on inside. The ammoniated brine from the absorbers flows in at the top of these towers and carbon dioxide from the kilns is blown in at the base. Inside, a chemical reaction takes place



COAL ARRIVES BY RAIL and is discharged by tippler to the boilers and finishing plant. Throughout Alkali Division one wagon of fuel is discharged every four minutes, twenty-four hours a day.



THE LIMESTONE GRAB. It shifts  $3\frac{1}{2}$  tons of stone at a single bite.



LIMESTONE-COKE CONVEYORS. They carry coke and limestone mixture—up to 120 tons an hour—from the "Half-way" House to the kiln-top bunkers.





BAG ELEVATORS at Wallerscote packing shed. They each move the finished product at the rate of 60 tons an hour.



SODA ASH FOR EXPORT leaves in Alkali Division's own craft, which travel down the river Weaver to Liverpool or Birkenhead and there off-load direct on to ocean-going vessels

in two stages, resulting finally in a precipitation of sodium bicarbonate in ammonium chloride solution. This is drawn off as slurry from the base of the towers.

The slurry travels in a white cascade to the filter building, where the ammonium chloride mother liquor is sucked through rotary filters—large, slowly rotating drums covered with blankets to the outside of which the white crystals of bicarbonate cling like fine snow. As far as making soda ash goes, all that remains to be done is to convert the sodium bicarbonate to sodium carbonate by heating it—the finishing operation.

The ammonium chloride mother liquor goes back to the process building, where it is eventually mixed with the milk of lime from the kilns. This frees the “fixed” ammonia, which goes back to the absorption system and is used all over again.

The finished sodium carbonate crystals are in a rather bulky and dusty form, so at Wallerscote Works a controlled

amount of water is added and the resulting crystals re-dried to give a denser form of crystal more suitable for export and for industries where the ash is furnace, as in glassworks and ultramarine factories. This dense soda ash is cooled during its long journey to the packing shed—about 150 yards by rotary worm conveyors—where it is weighed, bagged and loaded on to the waiting river craft, wagons or lorries.

Here is only the briefest and most simplified account of the main sequence in a highly complicated chemical process—a process where a deal of “know-how” is involved and many intricate engineering problems have been solved. The ammonia-soda process was first brought to England in 1872 by Ludwig Mond under licence from Ernest Solvay of Belgium. His struggle to establish the first works at Winnington in Cheshire—a stone's throw from the present Wallerscote Works—is an example of private enterprise at its best.



# HOLIDAY ON SKIS

By John Hinchliffe (Southern Region)

A fortnight's ski-ing in Norway for under £25 is a scheme run by the Ski Club of Great Britain and others. There are two conditions: you must be a beginner, and you must first take six "dry ski-ing" lessons. Here is an account of what this wonderful holiday is like.

BY means of ski training expeditions to Norway during the past two years, the Central Council of Physical Recreation and the Ski Club of Great Britain have been jointly responsible for introducing 850 men and women to the sport of ski-ing.

The object of the scheme has been to give these people an opportunity of getting to know the sport—with the minimum amount of trouble and expense. The only stipulations are that anyone wishing to take part must have had no previous ski-ing experience and must be prepared to attend six "dry ski-ing" lessons in this country before leaving for Norway.

I was able to go on one of these expeditions for a fortnight early last March. Parties are being organised now to leave weekly this winter, by both sea and air, from the middle of January to the middle of April.

I duly turned up for my dry ski-ing lessons at the gymnasium of an army barracks in London. These indoor lessons lasted for an hour each time, half of which was spent doing physical exercises specially designed to loosen the muscles used when ski-ing, and half doing exercises for which ski boots and skis were necessary. By means of these it was hoped to accustom us to the more elementary ski-ing manoeuvres. We were to appreciate their value when we reached Norway.

A special word of praise is due here to the Central Council of Physical Recreation—a non-profit-making organisation—and to the Ski Club of Great Britain. They arranged for the cost of the journey both ways, for full board and accommodation, for the loan of boots, skis and waterproof clothing, and for the dry ski-ing lessons—all to be paid for in England. Beyond having to provide myself with gloves, goggles and, of course, cigarettes and similar things for personal enjoyment, my out-of-pocket expenses were practically nil.

Possessing an inherent suspicion of inclusive fees, I was most impressed by the arrangements made for the expedition: they were admirable.

Our party, numbering approximately 35, was composed of an air section, which flew to Stavanger and then went up the

coast to Bergen by boat, and a sea party which sailed direct from Newcastle to Bergen. I went by sea, and though it was rough we all had comfortable cabins in which to hide our misery.

For those who could face it the food on board was a dream—thick juicy steaks and butter, as much as one could possibly eat. After twenty-four hours at sea we reached the Norwegian coast and followed it through the night, arriving at Bergen early the next morning. The Norwegian customs were delightfully informal and in a very few minutes we were in a motor coach on our way to the railway station to catch the train to Geilo, where the ski-ing was to take place.

The train journey was something of a thrill in itself. At first the track wound its way along the edge of a fjord, with mountains towering hundreds of feet above, then it climbed up over the mountains themselves, so that at its highest point it was at a height of over 4000 feet, above the tree-line, and running between huge banks of snow.

The town of Geilo, which is one of the chief winter sports centres in Norway, lies at a height of about 2600 feet and is half-way between Bergen and Oslo, in a lovely wooded valley containing several lakes, which in the spring are famed for their trout.

We found the snow lying fresh and deep, while the atmosphere was as clear as crystal. Taxis were at the station to meet us and take us to our various hotels, where we were able to do full justice to the first of the huge meals which we were to enjoy for the next fortnight.

The quantity and quality of the food which he gets is always liable to leave its impression on the mind and the waistline of the Englishman when he ventures abroad in these days. For me Norway was no exception; at every meal we had the famed "smorgesbrod," which is a comprehensive selection of cold meats, fish and cheese, while the main course at each meal alternated between fish and meat and the only limit to quantity was one's ability to consume.

The hotel, like most other buildings in the village, was



THE THRILL OF SKI-ING lies in the crisp beauty of the snow, the perfect co-ordination of muscle and movement, and the speed at which turns such as this—the Christiania—are executed

Camera Press Photo





A JUMP TURN—but this one will end in disaster

built of wood. It was centrally heated and most comfortable. One intriguing thing was that our beds were made up in Scandinavian style—no blankets, just a large down quilt enclosed in a linen case. Very warm they were, too.

Another excitement was the Finnish baths. For these one began by having an ordinary hot shower bath, followed by five minutes in a very hot room with the temperature at 60° C. or more. The heat was maintained by pouring hot water on to red-hot stones which were on top of a roaring stove. At the end of the first five minutes one had another hot shower and then another five minutes in the hot room. Then we ran out into the snow and rolled in it. This was followed by a long cold shower, and all that I was capable of doing after that was to lie on my bed for half an hour to recover my strength.

It may sound like some diabolical torture, but in fact it was most exhilarating and removed all aches and pains as if by magic. It was an experience that I would not have missed.

On the first afternoon we collected our "anoraks"—hooded, windproof and waterproof smocks—and our over-trousers; we were then fitted with boots and skis, after which we were all set to begin our lessons. Each party in the expedition was divided into three mixed classes of men and women and each was under a Norwegian instructor, who spoke good English and was giving his services free for a fortnight or more in return for his keep.

Until we became accustomed to the feel of skis progress was a little slow, but soon we were doing straight downhill runs, followed by "snow-ploughs," "snow-plough" turns and finally "stem" turns. Instruction lasted from 10 a.m. to 12.30 p.m.

and again in the afternoon from 2.30 to 4.30, after which, if one had any energy left, one could practise on one's own until 5.30 p.m.

As soon as we had learned how to stop and to turn—which took three or four days—we were taken on tours of gradually increasing length. These entailed walking up and ski-ing down recognised tracks through the mountains and woods. The longer tours proved to be very strenuous but most enjoyable, and the run downhill at the end was a great thrill—even greater if accomplished without a fall. The tours proved to be one of the most enjoyable parts of the whole holiday, the longest being some nine miles, during which we climbed about 1500 feet. In the clear atmosphere the

mountains looked magnificently rugged and beautiful.

Finally we took our proficiency tests. They were fairly hard, and only six members of our party passed the S.C.G.B. third-class test.

The weather was good throughout. It snowed quite often during the nights, which were very cold, our lowest temperature being —20° C. The days, even when the sun was not shining, were bright and clear, although it was sufficiently sunny for me to collect a tan which would have done justice to the South of France.

In the evenings there was dancing at one or other of the hotels, and sometimes a concert provided by the villagers, or a film show. Here I would like to say a word about the Norwegians, who are a most kind and friendly people and who, whenever possible, did all they could to make our stay even more enjoyable.

Needless to say, the fortnight seemed to fly past, and all too soon we were back in the train on the first leg of our journey home. The holiday was one which I can unhesitatingly recommend to anyone at all interested in winter sports, especially if they have thought twice about going because of being on their own or because of expense. The total cost of my holiday was well within the £25 limit and no more than it would be for a fortnight by the sea in the summer in England. Every penny of it was more than worth it. I came back fitter than I have been for many a day, and while not claiming to be able to ski I shall enjoy my next winter holiday all the more, because I now know something about how to use a pair of skis.

# I.C.I. NEWS

## TWO NEW DIRECTORS APPOINTED

ON 25th September Mr. J. L. Armstrong and Mr. P. K. Standing were appointed to the Board of I.C.I. Mr. Armstrong, formerly I.C.I. Treasurer, becomes finance Director in succession to Mr. S. P. Chambers, and Mr. Standing, chairman of Dyestuffs Division, succeeds Dr. Cronshaw as Dyestuffs and Pharmaceuticals Group Director.



Mr. J. L. Armstrong

Mr. Armstrong was born in County Durham and educated at Middlesbrough High School and Cambridge University. At Cambridge he took his B.A. (Maths Tripos). After serving in the Yorkshire Regiment during the first world war he studied as a chartered accountant, and in 1929 he joined the Treasurer's Department of I.C.I.

For the whole of his career in the Company since then he has been with Treasurer's Department. He was made Assistant Treasurer in 1937, Deputy Treasurer in March 1945, and on 1st November, 1945, he was appointed Treasurer. Since October 1951 he has been chairman of I.C.I. (New York)

Ltd. and a director of Arnold Hoffman & Co., I.C.I.'s American associates.

Mr. Armstrong is married and has three children. He lives near Camberley in Surrey, where he farms on a small scale. He is a keen cricketer and golfer.

Mr. Standing, a native of Lancashire, was educated at Manchester Grammar School and Manchester University, from which he graduated B.Sc. (Hons.). He joined the Research Department of Levinstein Ltd. in 1917 as a chemist and shortly afterwards was transferred to the Ellesmere Port factory, where for fifteen years his main concern was the manufacture of synthetic indigo. In 1931 he became works manager at Ellesmere Port and in 1937 works manager of the Blackley factory. Five years later he became group works manager. He was appointed a Dyestuffs Division director in 1944, and joint managing director of the Division a year later. In 1951 he was appointed Division chairman.

Mr. Standing was also a member of the Plastics Division board from 1945 until February this year. He is at present a member of Wilton Council.



Mr. P. K. Standing



### Mr. Steel leads Overseas Mission

It was announced last month that Mr. J. L. S. Steel, Group A Director of I.C.I., had accepted an invitation from the Secretary of State for the Colonies to lead an industrial mission to the West Indies.

The mission, composed of British industrialists, left the United Kingdom by air on 17th October. It is visiting Jamaica, Trinidad, British Guiana and Barbados at the invitation of those colonies, to investigate the possibilities of further industrial development, to suggest the direction which such development might take, and to indicate what industries or types of industry appear suitable for establishment. It will report its findings to the governments of the territories concerned and to the Secretary of State for the Colonies, Mr. Oliver Lyttelton.

Mr. Steel was chairman of Alkali Division before he joined the Board of I.C.I. in 1945. Since then he has acted successively as director in charge of the Paints and Plastics Group, as Joint Personnel Director, and as Development and Overseas Director. In 1951 he was elected chairman of the British National Committee of the International Chamber of Commerce. He is also chairman of the Overseas Trade Policy Committee of the Federation of British Industries. He has travelled widely: in Japan, China, Manchuria, India, Malaya, South Africa, the United States, Canada, Brazil, the Argentine, and throughout most of western Europe.

### Sir Wallace Akers

The Lord President of the Council has appointed Sir Wallace Akers, C.B.E., F.R.I.C., Research Director of I.C.I., to be a member of the Advisory Council for Scientific and Industrial Research.

The Council deals with broad questions of policy and advises the Lord President on the work of each research organisation of the Department of Scientific and Industrial Research. It is composed of scientists, industrialists, and trade union officials.

### HEAD OFFICE

#### Mr. R. B. Brown

A well-known figure at Head Office, Mr. R. B. Brown, has retired after 46 years with I.C.I. and its predecessors.

For 33 years, from 1919 until his retirement, Mr. Brown was on the directorate staff. For the great part of this time he was assistant to the late Mr. H. J. Mitchell; later he became Conference Secretary to the Overseas Director.

As a result of this long experience he gained what must be almost a unique knowledge of the Company, especially of the personalities who guided it during its earlier years. His many contacts with Head Office, divisional and overseas personnel resulted in his becoming one of the best known and most respected figures in Head Office, but he always remained characteristically modest and retiring.

He had a most unusual experience (of which it is difficult to persuade him to talk) during the first world war. In 1913 he had been sent by the Nobel Dynamite Trust to work in Germany under a scheme for exchange of staff, and he was interned at Ruhleben near Berlin when war broke out. His services in representing his fellow internees in their dealings with the American Ambassador, who looked after the interests of British civilian prisoners, resulted in his being released to

work on their behalf at the American Embassy. Later, when America entered the war, he carried on with this work at the Dutch Embassy. He was one of only three Englishmen who were so released and who lived for the greater part of the war at large in Berlin. For his services to his fellow prisoners he was awarded the M.B.E.—a fact which, characteristically, he always tries to conceal. It was when he returned from Germany in 1919 that he began his long career as a member of the directorate staff.

*A colleague writes:* "Bobbie was a mine of information and a tower of strength. He did not know the meaning of the term 'self-seeking,' and as a result he gained many real friends as distinct from mere acquaintances. We already miss him, and wish him a long, happy retirement, together with a progressive decline in his already respectable golf handicap."

### ALKALI DIVISION

#### Flying Footballers

The I.C.I. (Alkali) F.C. made news and club history on 12th September when they visited Billingham for their biennial football fixture. They left Winnington after work by coach as usual. But instead of continuing the six-hour drive by road, the coach went straight to Ringway and the team unloaded at Manchester Corporation Airport.

After a short delay the party moved out across the tarmac into a gleaming Dakota belonging to a charter company that had undertaken to fly them to Billingham and back. Thanks to a late take-off and the deterioration of the weather the flight was rather disappointing, for the clouds hid most of the view and towards the end of the journey darkness fell. In the last five minutes of the 45-minute trip it was impossible to see the ground below except for the lights. The pilot made a faultless landing on the grass runway at Greatham aerodrome without the aid of any aerodrome lights. The Billingham team were waiting at the aerodrome and quickly took the party to the Grand Hotel, West Hartlepool, where both teams spent a very friendly evening.

The next day the two teams turned out on the Synthonia ground, and a fair but not exciting game resulted in Synthonia winning by 2-0.

After tea and a gossip the Alkali footballers were taken to Greatham airport. Another quick and uneventful flight, and



Alkali footballers get off to a flying start for Billingham

the team found itself in the coach from Ringway for home, with just time to call in at the Nag's Head for the last stop of the evening.

### Decoration for Retired Fire Superintendent

We are proud that the fourth British Fire Service Meritorious Service medal to be awarded in the country has gone to an Alkali Division pensioner. He is Mr. G. H. Lewis, who until March this year was the Division Fire Superintendent. He retired after nearly 40 years' professional fire service, including almost 33 years with the Company.



Mr. G. H. Lewis

Mr. Lewis first entered the fire service in 1912 at Wolverhampton and was transferred to Coventry in 1914. A rigorous and detailed training in all aspects of fire prevention and extinction, and the mechanics of steam fire engines, self-propelled pumps, and ambulances, went hand in hand with his subsequent promotions to Sub-Officer, Brigade Engineer and, finally, Second Officer, in 1915. He was then seconded to the Ministry of Munitions at Coventry to supervise fitting fire apparatus at a new powder filling factory and the organisation of the fire brigade which, in addition to the full-time complement of 37, employed 80 auxiliary firemen and 47 women auxiliaries.

In August 1919 Mr. Lewis joined the fire brigade of Brunner, Mond and Co. Ltd. as a shift fire officer at Winnington, and he was appointed Fire Superintendent of the Division in 1935. There is no doubt that his influence and leadership have played a great part in the attainment of the fire brigade efficiency of today.

Throughout his career he has been a member of the National Fire Brigades and Professional Fire Brigades Associations, serving for four years as chairman of the north-western district of the former. Later the two associations amalgamated to form the British Fire Services Association, of which he was elected a vice-president of the north-western district.

In his spare time Mr. Lewis could be found in (or under) his car or enjoying a quiet game of billiards or snooker at the Winnington Recreation Club, where he was a member of the club team for many years. He also enjoys gardening and bowls, and in his younger days he was a keen footballer and cricketer.

### BILLINGHAM DIVISION

#### Billingham's Own Newspaper

Last month Billingham Division said good-bye to two trusty friends: the Division's *Magazine* insert and the *News Sheet*. To take their place came a new publication, *The Billingham Post*, a four-page, fortnightly newspaper.

The "Post"—the title was chosen from 700 entries in a competition—aims to give its readers news of all aspects of life at Billingham and the outside factories of the Division. As well as items on technical and commercial developments, personalities and club and social activities there are features for women, a children's corner, a gardening column and an advertisement service.



The first issue of The Billingham Post

Billingham's newspaper is the same size as a local evening newspaper and is printed by a South Shields newspaper publishing firm. The first edition, published on 1st October, ran to some 20,000 copies, which were distributed free to Division employees. Subsequent editions have been sold at 1d. per copy, and the editor, Mr. S. G. Wallace, says that sales have kept well up.

Mr. Wallace has a full-time staff of three to assist in running *The Billingham Post*. But he maintains that it will depend to a very great extent for its success on the army of unpaid newspaper-gatherers which has been set up throughout the factories and offices.

### Captain A. Hayton Cowap

His very many friends in I.C.I., and particularly at Billingham, where he is so well remembered, will doubtless have been pleased to see that Captain Cowap, partnered by Dr. Esmond Willans, reached the semi-final of the Calcutta Cup foursomes at St. Andrews. Their handicap was 11. This was a splendid effort and we take off our hats to them. Captain Cowap won the Chemical Trade Golf Competition nearly thirty years ago, and has been prominent as the playing captain of the Billingham team which has won the Rayner Cup on "Chemical Trade" day so often in recent years.

We wish him continued good health and happiness in his retirement.



Captain Cowap

### DYESTUFFS DIVISION

#### "Jog-along" Holiday

An unusual type of transport was chosen by two Dyestuffs Division girls, Miss Shirley Green, a tracer in Huddersfield Works Drawing Office, and Miss Hazel Braisby, a laboratory



assistant from the Nylon Department, for their summer holiday. Accompanied by two friends they chose to travel to the seaside resort of Morecambe on horseback, taking three days over the journey each way.

Leaving Huddersfield about 6 p.m., the party reached a suitable camping site on the moors above Keighley without difficulty and without adventure, except that Jill, one of the



Miss Shirley Green and Miss Hazel Braisby leave Huddersfield on horseback for Morecambe

ponies, got into the tent during the evening and stole some sandwiches. They spent the second night at the Bridge Inn at Ingleton, after covering no less than 40 miles. And on the third night the friendly stables of the proprietor of a number of beach ponies were reached in good time.

The ponies were rested during most of the stay in Morecambe, and although they never saw the illuminations they enjoyed paddling in the water during a short trip along the beach to Heysham.

The luggage, and corn for the ponies, was taken along in a shandy by the proprietor of a small riding school where Miss Green teaches in her spare time on Sundays. Her great ambition is to possess her own horse or pony.

### Pigeon Fancier

Mr. Jack Edwards, of Dyestuffs Division's Biological Laboratories at Stamford Lodge, Wilmslow, has good reason to be proud of his racing pigeons. Racing them in Section F of the National Flying Club he has won prizes this year amounting to £80. Section F comprises birds from seven north-western counties, and in four of the events in which they raced Mr. Edwards' birds were ahead of 6792 competitors.

In the National Flying Club's race from Nantes on 15th June Mr. Edwards got one pigeon home, the third in his section and 20th out of 3079 in the race; and in the Young Bird club race on 30th August his pigeon, which was the only one to clock in on the same day, was first in his section and 14th out of 2701.

Among other events in which he did well were the race from northern Marennes and the race from Guernsey. In the race



Mr. Jack Edwards and some of his racing pigeons

from northern Marennes, on 13th July, arranged by the Southern Stockport Racing Section, Mr. Edwards' bird finished 12th out of 410. In the Manchester open club race from Guernsey which started on 8th September only 40 pigeons out of 662 managed to get home within two days after liberation, and among these was Mr. Edwards' pigeon, which finished 14th.

### I.C.I. Girl makes College History

The first girl ever to gain the Union of Lancashire and Cheshire Institutes' National Certificate in mechanical engineering is Miss Joan Steadman of Dyestuffs Division Engineering Department.

Miss Steadman started work as a tracer four years ago. She soon became extremely interested in her job, and so that she could better understand the complicated plans and diagrams she had to copy she decided to take a technical course in engineering at the Radcliffe Technical College. The instructors and students were a little surprised when Miss Steadman took her place three years ago with a class of young men about to start a course of evening study in mechanical engineering. She says that at first they were a little chary of her, but when they realised she was really serious about the course they gave her a great deal of help. Most of her fellow students were employed in engineering works and already had a good grounding in engineering principles, but Miss Steadman found the work hard and often had to make a detailed scale drawing of a piece of machinery whose function she did not even know.

For three evenings each week over three years Miss Steadman studied mathematics, engineering science, drawing, and



Miss J. Steadman

general engineering practice; but she felt her hard work had been repaid when she heard of her success. The fact that she now understands the purpose of the drawings she traces has given her a much greater interest in her work. And that alone, Miss Steadman says, has made her studies worth while.

### PAINTS DIVISION

#### Mrs. Quig presents Gala Prizes

In September last year 1500 Slough employees and their families went to Duffield House to celebrate the opening of their new sports grounds with a gala. An ambitious programme was ruined by torrential rain, and voicing the resentment felt by everyone at the perversity of that summer cloudburst, Mr. L. H. Williams, the Division chairman, declared: "We will not accept defeat. We are going to repeat this function next year and hope for better weather."

That pledge was handsomely redeemed on 6th September, when a fleet of buses transported over 3000 people to Stoke Green for a gala that was blessed with fine weather and the hard-working support of volunteers from every department on the three Slough sites.

There were sports events, exhibitions of horticulture, handicrafts, photography and needlework, and a children's corner with everything that pleases children, including a squadron of mechanical "Mobo" Broncos and snails.

Shortly after the band of H.M. Grenadier Guards had



Mrs. A. J. Quig receives a bouquet at the Slough gala from Susan Woodmass

launched the proceedings there came a delightful surprise in the person of Mr. A. J. Quig, a deputy chairman of I.C.I. and the original chairman of Paints Division. With him he brought Mrs. Quig to meet his old colleagues, and later she presented the main prizes of the afternoon.

#### Painter wins Suggestion Award

Mr. Lewis Crane, a painter employed in Slough Trades Department, received an award from the Suggestions Committee recently for devising a ladder safety hook which re-

moves a frequent cause of ladder accidents and at the same time saves valuable man-hours. His suggestion has now been adopted by five other Divisions and, to date, Mr. Crane has received supplementary awards from nine other I.C.I. factories. The "brain-wave" struck him while working on a ladder forty feet above the ground. He took it home that evening, wrestled with the solution, and brought the completed plan back to work the next morning.

Like most improvements resulting from a flash of intuition, Mr. Crane's device is simple in its construction and operation, as the accompanying photograph shows.



Mr. Lewis Crane



A brainwave that won an award: Mr. Crane's safety device for ladders

One of the safety rules for working with a portable ladder is that the bottom of the ladder must be held by somebody until it is securely lashed, to enable a second person to use the ladder. If there are no means of lashing the ladder, then it must be held at all times when an employee is on it.

This can be a wasteful procedure, and Mr. Crane has devised a hook which can be applied by the user single-handed and so dispense with the services of the second man. After being attached, at the most convenient height, to the rungs of the ladder, his fitting can be hooked over a projection, such as a pipe-line. There is a wide application for the device; in addition to preventing a ladder slipping at the bottom it prevents side-slipping, and thus removes a frequent cause of ladder accidents. It has been adopted in two Paints Division



factories and has found application in five other Divisions, involving ten factories in all.

Mr. Crane was looking into space when the idea occurred to him. "We were working on the shell of Slough's new warehouse," he explained, "painting the trusses and girders. Looking out into space forty feet up makes one feel nervous about one's foundations."

"My idea was tried out in the most awkward place I could find, the Research and Development Laboratory, with machinery away from the walls and held guards overhead. The works engineer and the safety officer were immediately convinced that it was a winner."

### "Associated Milwain Pictures Present . . ."

Last January a group of young ciné camera enthusiasts on the Slough site formed their own film company—Associated Milwain Pictures. Selecting actors from among their friends, and with their own homes providing the sets, they began to experiment. Last month at the Civil Defence Club, Maidenhead, they presented their first programme, in which the feature films were a comedy, *Better Late than Never*; *Night Final*, a thriller in which a boy and girl tangle with jewel thieves; and *An English Garden*, which tells the story of a large garden from spring to autumn seen through the eyes of a professional gardener.



Some of Slough's amateur film-makers and film stars sit in judgment on one of their productions

It all began when James Franklin, of Division Distribution Department, bought a ciné camera. James, who is 17, got together with Bill Jones of Works Laboratory and started filming, with Jim Morrissey of Distribution Department as cameraman. Norman Marlow of Division Stationery Office was also recruited, and there are now fifteen members in the company. None of the group are full-time photographers.

Mr. Franklin himself does most of the "backroom" jobs, drawing and painting the film titles and editing being among them. The films last for some twenty minutes each, but to achieve even this length involves three or four months' concentrated work and long hours of processing and editing.

"We're planning a really big production that will take the whole of next year to complete," says Mr. Franklin. "I shall be in the Forces before then, but when I return I hope to find the company still active, and to press on with a fascinating and worth-while hobby. In addition to the feature films we have made a number of filmlets, and during the winter we shall be able to sit back and enjoy the results of a hard summer's work."

## METALS DIVISION

### Record-breaking Cricketers

The end of the 1952 cricket season brought to the first XI of Allen Everitt Works at Smethwick a record of which they may be truly proud. For the third season in succession they carried off the championship of the Birmingham and District Works Cricket Association, Senior Division.

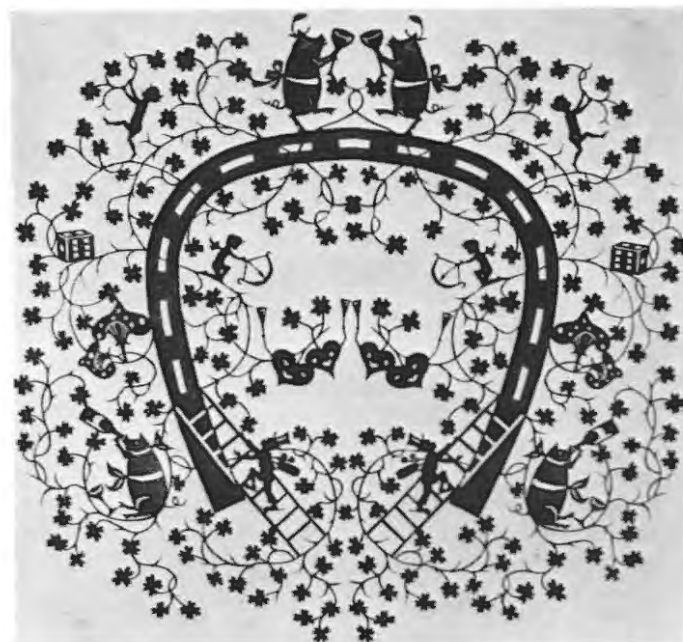
This feat has never previously been accomplished in the history of this organisation, which dates back to 1910. The full record for the season was: played 15, won 10, lost 1, drawn 4, with the one defeat by one run only. Two outstanding achievements were those of Harry Belk with a batting average of 44.22, and Fred John, who achieved a bowling average of 6.4 for an aggregate of 52 wickets. Other members of the side were responsible for some outstanding performances during the season under the able captaincy of George Burling.

The chairman of the Birmingham and District Works Cricket Association is Mr. B. W. James of Allen Everitt Works. He has held this position for twenty-four years, which must in itself be a record.

### A Novel Greetings Card

Miss K. A. Harrington, liaison officer for the Division's Lightning Fastener factories in France and Germany, recently received from an employee at one of them a greetings card in the remarkable form shown below.

The sender was Fräulein Ingeborg Schmidt, of Zipp Werk G.M.B.H., Frankfurt. The card was designed and executed by her in a technique called "scissor cut." Even in Germany, where it was once very popular, scissor-cutting is now becoming rarer and rarer, says Fräulein Schmidt, because of the labour and patience it involves. For these silhouettes Fräulein Schmidt uses special paper which is white on one side and black on the other. She draws the design—always her own—on the white side and cuts it out with a pair of specially small



Twenty-five hours' work went into this "scissor-cut" by Fräulein Schmidt of Frankfurt

and pointed scissors. The example illustrated took her about twenty-five hours to complete.

### Kynoch Men shoot for Britain

Four crack shots from Kynoch Works were instrumental in helping Great Britain win back the Dewar Trophy from America this year. The trophy is shot for annually by teams of twenty representing Great Britain, the U.S.A., Canada, South Africa, and other Commonwealth countries, and this year the four I.C.I. men—Messrs. W. B. Godwin, T. J. Knight, J. Hall and H. D. Skinner—were the mainstay of Britain's team.

The team as a whole made a score of 7964 out of a possible 8000—only four points under the world record. The Kynoch contingent dropped only four points among them, Godwin scoring 400, Knight and Hall 399 each, and Skinner 398. Good as they were, these results were not unexpected; the shooting of all four men has been brilliant throughout the season.

Godwin won the national championship of Great Britain at Bisley (in which, incidentally, he was following the example of Hall, who this year finished seventh). He also made the top score (299) for England at Bisley and won individual trophies at Edinburgh and Bisley.

Knight made top score for England both at Edinburgh, where he scored 300, and at Bisley, where he scored 299. He won one trophy and shared three others. Hall was equal top on two or three occasions. Skinner won the grand aggregate at the National Scottish and Stratford-on-Avon meetings, and afterwards took the Warwickshire County Championship.

### Surprise Ending

At the time when I.C.I.'s own Food Parcels for Britain Scheme was in full swing, Mr. Ben Thompson of Marston Excelsior Ltd., Wolverhampton, was one of the lucky recipients. Needless to say, he wrote at once to the donor, Miss M. Hamilton, of I.C.I. Melbourne, Australia, thanking her for this kind gesture.

From this beginning sprang a pleasant and interesting correspondence between Mr. Thompson and his wife in England and Miss Hamilton and her family in Australia. This summer, however, the letters from Australia stopped. Mr. Thompson, disappointed by this apparent lack of interest, was discussing it with his wife when a knock at the door heralded a great surprise—a visit from Miss Hamilton herself!

Having left home in April for an extensive tour of the Continent and Great Britain, Miss Hamilton and her sister were determined not to miss the opportunity of meeting their English "parcel-friends." Their welcome was, of course, enthusiastic, and arrangements for a week-end at Wolverhampton were at once set on foot.

## PLASTICS DIVISION

### Fish shakes Hands with Angler

A large crowd packed Birmingham's Woodcock Street Baths in July to watch something new in sport—an angler *versus* swimmer match in which the anglers pitted their skill against the wiles of their human prey, who dived, weaved and swam under water in their attempts to break away.

The first round was a twelve-minute contest between Mr. H. E. Haynes, a well-known Birmingham match angler, who

was using a "Terylene" line of 21 lb. breaking strain, and Mr. D. D. O'Neill of the Birmingham Swimming Club. Fortune was on the side of the angler, and in 7 min. 8 sec. Mr. Haynes had landed his "fish" and was generously assisting him from the water.



(Photo: Birmingham Post and Mail)

The one that got away: Mr. Daniel shakes hands with his would-be captor, Mr. Thurlow Craig

In round two, a fifteen-minute contest, Mr. A. S. Daniel (honorary secretary of the Birmingham Swimming Club) caused the angler, Mr. C. W. Thurlow Craig (angling correspondent of the *Birmingham Mail*), who was using a 'Luron' line, a great deal of trouble. Soon after the eighth minute the knot tying the swimmer's harness and the line parted, and Mr. Craig was treated to the nightmarish experience of having his fish swim up to him and shake him by the hand. The match had ended in a draw—Anglers 1, Fish 1.

## SALT DIVISION

### He breeds Schipperkes

Have you ever heard of a schipperke? If you have not you may be interested to know that it is a breed of dog, pronounced something like "skipper-key."

Schipperkes are natives of Belgium, where they are used for ridding grain barges, but in this country they are far from common. One of the people who breeds them is Mr. J. C. Goodier of Winsford Works. Recently one of his puppies won prizes at the championship show held at Handsworth Park, Birmingham, and at Nantwich Dog Show.

For show purposes the schipperke must not exceed 11 in. from shoulder to ground and must not weigh more than 15 lb. Mr. Goodier does not feed his with dog biscuits; he prefers to bake stale brown bread supplemented with cow beef which has been declared unfit for humans.

Jack Goodier has been breeding dogs as a hobby for 29 of his 31 years' service with the Company. Airedales, smooth-haired fox terriers, Alsations and Welsh corgis have successively claimed his attention and have gained him many show successes. "Alsations are particularly fascinating dogs," said Jack, "but they need a lot of exercise and a younger master than



I to give it them. So I had to change some years ago to something smaller."

Four years ago Mr. Goodier took a corgi to Cruft's show in London, and there he saw and became interested in the schipperke. In the following year he acquired his first schipperke, and now this breed shares space with the corgi in his six kennels.

## CENTRAL AGRICULTURAL CONTROL

### *The Hares and the Tortoise*

For the second year running Mr. Robert Coyle, foreman at Jealott's Hill farm, has beaten all comers in the ploughing competition of the Royal Forest Agricultural Association.



Mr. Robert Coyle

He won, as he did last year, with a plough drawn by two Clydesdale geldings. Mr. Coyle, though slower than the twenty tractor drivers against whom he competed, had a definite advantage in being behind his plough, where he could see the furrow as it was turned, rather than in front of it. This year, too, the competition took place on an extremely wet day; while the tractors' wheels slipped and skidded and their drivers cursed, Mr. Coyle trudged

serenely behind Charlie and Boxer to win comfortably for the straightness, neatness and regularity of his furrows.

Mr. Coyle's son Robert, who also works at Jealott's Hill, came second in the competition with a tractor-drawn plough.

## THE REGIONS

### *Service with a (Sceptical) Smile*

Regional sales offices are used to receiving requests for unusual products and long ago decided that "When in doubt, ask I.C.I." was the maxim of many customers. But the strangest request in recent times must surely be that of an American who telephoned Southern Region to ask if they could despatch a bottle of fog to London Airport.

With all due seriousness, but with a lurking fear that it was leg-pull by one of their representatives, the people in the Southern Region office started to thumb through the Products Handbook. They could offer "fog signals, for overhead cranes" and "fog signals, railway," but not "fog, London particular, bottle of." With a sceptical smile they referred the caller to the Government's Department of Scientific and Industrial Research.

A few days later they read in the newspaper, with some chagrin, no doubt, of an American professor, an expert on atmospheric pollution, who had hustled through London Airport clutching (you've guessed it) a bottle of London fog!

## I.C.I. (INDIA)

### *Drowning the Mosquito's Music*

In about 2000 teashops throughout India the praises of 'Paludrine' are being sung daily—over and over again.

"Hot teashops" to the Indian are what pubs are to the Englishman, and each is equipped as a matter of course with

a large, old-fashioned gramophone. It is from the ponderous horn of this machine that the 'Paludrine' song emerges, sung to a catchy tune in the vernacular of the district, here translated freely into English:

Listen!  
The river of life  
is lost in the sand  
in this deserted land where  
there is death—death.  
Have you ever been  
to this village before?

Voices sing no more.  
There are no  
human voices here;  
only mosquitoes sing  
in these heartbreak homes  
once living, but now dead.

The song elaborates this picture of the malaria-stricken village and then goes on:

But  
in this deserted land  
of jackals and sand dunes  
now sings  
one voice (god of science  
drowning mosquito's music),  
voice of hope,  
rising,  
filling the sky, bringing  
back the past

into the future and  
the future  
into the present, everywhere  
crying for  
the golden glow of life.  
driving back  
the years lean  
with disease—PALUDRINE!  
PALUDRINE . . . PALUDRINE . . .

The experiment of advertising by gramophone record was begun by I.C.I. (India) in Bengal. An Indian was commissioned to write the words of the song in Bengali, another to compose the tune, and for a total cost of £5 the matrix of the record was made. 500 copies were distributed in Bengal, where they made such a hit that the scheme was extended to territory covered by the Madras, Bombay and Kanpur offices, with new recordings in the appropriate dialects.

There is no doubt that this means of bringing 'Paludrine' to the notice of the illiterate has been a success. Among the literate the song has met with a mixed reception. One member of the staff of I.C.I. (India) regularly plays the record to party guests. Another, who lives within earshot of a "hot teahouse," cannot condemn the whole scheme strongly enough!

I.C.I. (India) is now selling close on a million 'Paludrine' tablets a day.

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## OUR NEXT ISSUE

In the December issue—our Christmas number—we are reproducing in colour three famous pictures of the Nativity: by Piero della Francesca, Jan Breughel and Rembrandt. Each of these pictures is of world renown, and each is remarkable for the utterly different way in which the artist imagines the scene at the birth of Our Lord.

Dr. J. Ferguson, managing director of General Chemicals Division, and formerly its research director, leads the *Magazine* with an article on the Division's research organisation. It was at the Widnes Research Laboratory that the famous insecticide BHC or 'Gamexane' (to give it the I.C.I. trade name) was developed; and as an illustration of the type of problem confronting research Dr. Ferguson traces the difficulties that were met with in the work on BHC.

Our next article is a photographic feature on the camp which Metals Division hold annually in Worcestershire for their young employees of apprenticeship age. Norman Vigars, whom readers will remember for his pictures of the Ardeer Recreation Club, both took the photographs and has written a lively account of the camp's activities. Finally, Gordon Long writes an amusing article on some of the classical howlers committed by Fleet Street journalists.

# "But answer came there none . . ."

By Ronald Farquharson (I.C.I. Shipping Manager)

Illustrated by Peter Probyn

To certain remarks—which I believe modern jargon describes as "clangers"—there is obviously no reply. When, a short time ago, I overheard an I.C.I. recruit, unaware whom he was addressing, ask a Main Board Director what he did in the Company, it recalled to mind my experience of one or two other episodes which, though not exactly in the same category, were of a somewhat similar nature.

My late headmaster—Canon Sawyer of St. Bees and Shrewsbury—survives as a legend, partially on account of his solid virtues, but primarily through his regular excursions into supreme and utter vagueness. In 1919 he ran across one of his old boys in the Lake District, and the younger man was both surprised and delighted to find that the absent-minded canon actually remembered his name. But Sawyer then proceeded to ruin the good effect by enquiring with less certainty: "Mmph. Let me see, now: was it you or your brother who was killed in the war?"

There was another contemporary of mine at school whom I unexpectedly bumped into during a visit to Los Angeles in 1934. He had just married a very young and lovely girl who hailed from Virginia. The three of us lunched together, and it inevitably followed that he and I should dwell at length upon characters and incidents concerned with our schooldays, while his bewildered and rather bored bride was somewhat brusquely left to her own devices.

She knew little of England and still less of its academic institutions; it seems that even the one school she had heard about had not registered with accuracy. Or again, perhaps, she was just being infinitely wise as she stifled a yawn and observed with disarming innocence: "I guess it must have been fun for you both to have been at *Harrods* together."

After that, of course, the conversation became general.

This brings me to reflect upon the American visitor I took to Twickenham in 1936. During the afternoon I introduced him to a man whom I had first encountered as a member of

the opposing scrum in a school fixture a score of years earlier and had, on one or two subsequent occasions, played against (alas! never with) in London club rugby during the early twenties.

After they had shaken hands the American, to my lasting humiliation, went on to enquire: "Say, have *you* ever got wise to this adaptation of the grid-iron game?" The other man looked at me and grinned—a littlesheepishly, I thought—and then howled to the American and politely turned away. I thought it better to refrain from insisting that my guest "get wise" to the fact that he had addressed his question to one who had, in his day, captained Sedburgh, the R.A.F., Cambridge University, the Harlequins, Middlesex and, on innumerable occasions, England as well.

I wonder if "Wakers" (Sir Wavell Wakefield, M.P.) remembers the incident.

Among my more highbrow and essentially serious-minded friends is David Webster, who some years ago surrendered his business interests in Liverpool in order to take over the full-time administration of Covent

Garden Opera House and the Sadlers Wells Ballet. I should say there are few men alive today who combine solid business acumen with such a profound knowledge and understanding, not only of opera and ballet, but of all the arts.

David is not content to live for these treasures himself: he has been responsible for countless others becoming conscious of them too. Though in America, a year or so ago, it was Margot Fonteyn who was the exquisite and deserving recipient of continued applause, she herself will tell you that it was primarily the genius of David Webster which made Americans aware, for the first time, that England could outbid even Russia for honours in its presentations of the ballet. This should be sufficient to stress that the director of Covent Garden is not a facetious person who takes his task lightly.

In the dining-car of the Merseyside Express he talked to me



"Mmph. Let me see, now: was it you . . ."



at length—though much of it was above my head—on the current activities and aims of Covent Garden. It happened that I had as my other companion a young and half-attentive New Zealander who had but lately arrived in this country and was aware of Covent Garden only inasmuch as its more earthy connections are concerned. Suddenly he collected himself with a view to contributing at least something towards the conversation.

"And tell me, Mr. Webster," he enquired, "how is the fruit business these days?" I can only add that Mr. Webster, possibly for a variety of reasons, thought it quite the unfunniest remark he had ever heard. And that—to me—of course, made it funnier still.

Naturally, I've put my own foot in it on a number of occasions as well; though oddly enough and quite undeservedly I generally seem to have withdrawn it either to my greater advantage or just in time.

I once had an uncle—an elderly bachelor full of amiable weaknesses and suffering from a chronic condition of *locomotor ataxy*. At the age of 9 I succeeded in startling him out of his wits by blurting forth without warning: "When you're dead will you leave me your watch?"

I remember the rather haunted look which clouded his rubicund features as he cast a watery eye down upon me; then, having drained his glass in one audible gulp, he unhesitatingly stripped his waistcoat of watch, chain and appended sovereign and passed them over to me without a word. I stowed the lot away for eleven years before finding it expedient to detach the sovereign and barter the rest in exchange for a fiver and a ticket which was embellished with the name of Attenbrough.

While the earlier phase of this happening drew forth some sharp criticism from my father, coupled with an urgent injunction to restore the property *instanta*, my uncle steadfastly refused to be a party to it. Sufficient, perhaps, to add that he continued to enjoy life for many years beyond his allotted span, relying entirely on his instinct to tell him when "they" were open.

Then there was a mild incident, which came close to being catastrophic, in Shanghai. It must have happened in 1932, because it was in that year that a halt was called to my wanderings—ostensibly in aid of I.C.I. business—through the remoter regions of north China; and I found myself pitchforked into the ever-gay but largely artificial atmosphere of International Settlement life.

Very late one night our party became unaccountably merged

with another which was composed of distinctly Latin ingredients. While my wife was being put through an incredible succession of paces by a gallant, handsome and freely perspiring Italian count, I shared the dance floor with his countess. She was eagle-faced and intense and, despite the fact that she talked the whole time, contrived to introduce an abnormal sense of rhythm into the comparative calm of a foxtrot. She was that type of partner whom most men abhor—a woman who leads. She was also a woman of forceful ideas and obviously a fanatical believer in the doctrines of dictatorship, such as were then being applied to her beloved Italy.

I became a little impatient, feeling that I was no more than mere clay in the hands of the potter; and I sought to make the exchanges less one-sided and preserve my "face" by means of some ruthlessly provocative remark. It was that sort of hour in the evening.

"Mussolini," I ventured, "may be all you say he is; but I should have thought that an intelligent and cultured woman, such as you, must regard him . . ." I forget whether I was about to say "as something of an upstart" or "with grave misgivings." Mercifully it was of no consequence, since at that moment the hand stopped playing and our argument ended with equal abruptness—never to be resumed.

"Who," I enquired presently of my wife, "was your dark and fast-moving nobleman?"

"Oh, that!" she replied with an assumed air of indifference. "That, I'll have you know, was the dashing son-in-law of *Il Duce* himself."

Only then did I realise that I had just danced with Edda Ciano.

Finally, I would like to recount a rather different incident, which was also set in Shanghai, some seven or eight years earlier. There was a young man—(I shall not be more explicit than to add that he was connected with our Company, was then a bachelor, and still delights to tell the story against himself)—a young man who at that time was particularly anxious to make himself *persona grata* in the eyes of the British Consul-General, since that official had a young and lovely daughter, whose reaction to the honourable advances of the young man had thus far been but slightly less than lukewarm.

At the same time he was a person—and I have his permission to quote the fact here—who was partial to his odd noggin in the fellowship of men at one or other of the clubs on his way home from the office.

One day he received from



An elderly bachelor full of amiable weaknesses



"But . . . but I don't understand," said Mrs. Consul-General slowly. . . .

the wife of His Britannic Majesty's representative a card—officially embossed and beautifully gilt-edged—inviting his company at a soiree timed for 9 p.m. on a specified date. This he took careful note of, and, as further insurance against any falling by the wayside, tenderly placed the treasured invitation on the mantelpiece directly opposite his bed so that he might contemplate it last thing at night and upon waking each morning. He vowed most solemnly to himself that when the auspicious date came round he would *not* make his usual detour—"via ports"—before reaching home in the evening.

Thus far he preserved it. On the day in question his decorum was as immaculate as he himself turned out to be at about 7.30 in the evening: white tie, shining stiff shirt and tails, he was the epitome of an advertisement for Moss Bros. Only one thing was wrong—his timing. Presently he received a caller—an older Shanghai hand—similarly, though not so meticulously clad, as he was himself.

"It is inconceivable and unheard of," insisted the other man, "that any self-respecting citizen should attend the C.G.'s party without a little something to boost up flying speed first—they are distressingly formal affairs. Now, to offset that I've brought with me a bottle of 'just-the-job'."

For a long time the younger man remained steadfast and adamant. It was a lovely evening and his thoughts dwelt on the moonlit garden which lay behind the consulate, where there might be the shadow of trees on the turf, almond bloom, and the scent of pine. . . .

Then, at intervals, this: "Well, just one; but no more." "I say, this is good stuff! Just top it up—that's all." "All right; s'long as it's positively the last." "No, I'm feeling simply fine." "Hell! Have we finished it?"

It was 9 o'clock on the following morning when, still clad in his now ruffled finery, he rose from his bed and regarded his unkempt hair and crumpled shirt-front in the mirror. Then he turned to see that beautifully embossed invitation mocking at him from the mantelpiece. His hand flew to his throbbing forehead as he tried desperately hard to recollect how he could ever have allowed himself to be so woefully led astray. But he could remember nothing save the extreme potency of his satanic friend's mixture.

Later in the day he recovered and, seeking to make amends, hired himself a ricksha which bore him to the British Consulate-General, where, to his considerable surprise, he was most affably received by mother and daughter alike.

"I called," he explained, "to say how sorry I was that a sharp attack of the colic quite prevented me from attending your soiree last night."

Mother and daughter looked at each other for a moment, then both turned their eyes on him.

"But . . . but I don't understand," said Mrs. Consul-General slowly. "Not only did you come, but you were the life and soul of the party."

He swallowed; he stammered; he almost choked. But answer came there none. . . .





"Singapore Boatmen"

Photo by L. Nixon (R.A.F., ex General Chemicals Division)